Results 1 - 20 of 20

Sort by relevance in expanded form

Save results to a Binder

1 Compressing large boolean matrices using reordering techniques

David Johnson, Shankar Krishnan, Jatin Chhugani, Subodh Kumar, Suresh Venkatasubramanian

August 2004 **VLDB '04: Proceedings of the Thirtieth international conference on Very large data bases - Volume 30** , Volume 30

Publisher: VLDB Endowment

Full text available: Pdf (288.67 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 40, Downloads (Overall): 89, Citation Count: 8

Large boolean matrices are a basic representational unit in a variety of applications, with some notable examples being interactive visualization systems, mining large graph structures, and association rule mining. Designing space and time efficient ...

2 Continuous program optimization: A case study

Thomas Kistler, Michael Franz

July 2003 **Transactions on Programming Languages and Systems (TOPLAS)** , Volume 25 Issue 4

Publisher: ACM Request Permissions

Full text available: Pdf (877.67 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 29, Downloads (12 Months): 156, Downloads (Overall): 1659, Citation Count: 25

Much of the software in everyday operation is not making optimal use of the hardware on which it actually runs. Among the reasons for this discrepancy are hardware/software mismatches, modularization overheads introduced by software engineering considerations, ...

Keywords: Dynamic code generation, continuous program optimization, dynamic reoptimization

3 Compiler-based I/O prefetching for out-of-core applications

Angela Demke Brown, Todd C. Mowry, Orran Krieger

May 2001 **Transactions on Computer Systems (TOCS)** , Volume 19 Issue 2

Publisher: ACM Request Permissions

Full text available: Pdf (499.03 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 55, Downloads (Overall): 929, Citation Count: 17

Current operating systems offer poor performance when a numeric application's working set does not fit in main memory. As a result, programmers who wish to solve "out-of-core" problems efficiently are typically faced with the onerous task ...

Keywords: compiler optimization, prefetching, virtual memory

4 GPGPU: general purpose computation on graphics hardware

David Luebke, Mark Harris, Jens Krüger, Tim Purcell, Naga Govindaraju, Ian Buck, Cliff Woolley, Aaron Lefohn

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (63.03 MB) Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 118, Downloads (12 Months): 1305, Downloads (Overall): 7260, Citation Count: 20

The graphics processor (GPU) on today's commodity video cards has evolved into an extremely powerful and flexible processor. The latest graphics architectures provide tremendous memory bandwidth and computational horsepower, with fully programmable vertex ...

5 Static correlated branch prediction

Cliff Young, Michael D. Smith

September 1999 **Transactions on Programming Languages and Systems (TOPLAS)** , Volume 21 Issue 5

Publisher: ACM Request Permissions

Full text available: Pdf (508.49 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 65, Downloads (Overall): 580, Citation Count: 7

Recent work in history-based branch prediction uses novel hardware structures to capture branch correlation and increase branch prediction accuracy. Branch correlation occurs when the outcome of a conditional branch can be accurately ...

Keywords: branch correlation, branch prediction, path profiling, profile-driven optimization

6 A software development tool chain for a reconfigurable processor

Alberto La Rosa, Luciano Lavagno, Claudio Passerone

November 2001 **CASES '01:** Proceedings of the 2001 international conference on Compilers, architecture, and synthesis for embedded systems

Publisher: ACM

Full text available: Pdf (79.88 KB) Additional Information: full citation, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 38, Downloads (Overall): 503, Citation Count: 7

7 Space-time points: 4d splatting on efficient grids

Neophytos Neophytou, Klaus Mueller

October 2002 **VVS '02:** Proceedings of the 2002 IEEE symposium on Volume visualization and graphics

Publisher: IEEE Press

Full text available: Pdf (1.48 MB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 49, Downloads (Overall): 416, Citation Count: 5

4D datasets, such as time-varying datasets, usually come on 4D Cartesian Cubic (CC) grids. In this paper, we explore the use of 4D Body Centered Cubic (BCC) grids to provide a more efficient sampling lattice. We use this lattice in conjunction with a ...

8 Point-based computer graphics

Marc Alexa, Markus Gross, Mark Pauly, Hanspeter Pfister, Marc Stamminger, Matthias Zwicker

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (8.94 MB) Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 39, Downloads (12 Months): 361, Downloads (Overall): 2692, Citation Count: 7

This course introduces points as a powerful and versatile graphics primitive. Speakers present their latest concepts for the acquisition, representation, modeling, processing, and rendering of point sampled geometry along with applications and research ...

9 Escape analysis for Java™: Theory and practice

Bruno Blanchet

November 2003 **Transactions on Programming Languages and Systems (TOPLAS)** , Volume 25 Issue 6
Publisher: ACM Request Permissions

Full text available: Pdf (684.21 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 81, Downloads (Overall): 1106, Citation Count: 22

Escape analysis is a static analysis that determines whether the lifetime of data may exceed its static scope. This paper first presents the design and correctness proof of an escape analysis for Java™. This analysis is interprocedural, context ...

Keywords: Java, optimization, stack allocation, static analysis, synchronization elimination

10 Terrain database interoperability issues in training with distributed interactive simulation

Guy A. Schiavone, S. Sureshchandran, Kenneth C. Hardis

July 1997 **Transactions on Modeling and Computer Simulation (TOMACS)** , Volume 7 Issue 3
Publisher: ACM Request Permissions

Full text available: Pdf (443.34 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 75, Downloads (Overall): 807, Citation Count: 1

In Distributed Interactive Simulation (DIS), each participating node is responsible for maintaining its own model of the synthetic environment. Problems may arise if significant inconsistencies are allowed to exist between these separate world views, ...

Keywords: distributed interactive simulation, terrain databases

11 Stream Processors: Progammability and Efficiency

William J. Dally, Ujval J. Kapasi, Brucek Khailany, Jung Ho Ahn, Abhishek Das

March 2004 **Queue** , Volume 2 Issue 1
Publisher: ACM Request Permissions

Full text available: Html (30.66 KB), Pdf (25.99 MB) Additional Information: full citation, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 265, Downloads (12 Months): 2468, Downloads (Overall): 4188, Citation Count: 12

12 From flop to megaflops: Java for technical computing

José E. Moreira, Samuel P. Midkiff, Manish Gupta

March 2000 **Transactions on Programming Languages and Systems (TOPLAS)** , Volume 22 Issue 2
Publisher: ACM Request Permissions

Full text available: Pdf (371.84 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 70, Downloads (Overall): 819, Citation Count: 12

Although there has been some experimentation with Java as a language for numerically intensive computing, there is a perception by many that the language is unsuited for such work because of performance deficiencies. In this article we show how optimizing ...

Keywords: arrays, compilers, java

13 Facial modeling and animation

Jörg Haber, Demetri Terzopoulos

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes
Publisher: ACM Request Permissions

Full text available: Pdf (18.15 MB) Additional Information: full citation, abstract

Bibliometrics: Downloads (6 Weeks): 77, Downloads (12 Months): 725, Downloads (Overall): 5383, Citation Count: 0

In this course we present an overview of the concepts and current techniques in facial modeling and animation. We introduce this research area by its history and applications. As a necessary prerequisite for facial modeling, data acquisition is discussed ...

14 The elements of nature: interactive and realistic techniques

Oliver Deussen, David S. Ebert, Ron Fedkiw, F. Kenton Musgrave, Przemyslaw Prusinkiewicz, Doug Roble, Jos Stam, Jerry Tessendorf

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (17.65 MB) Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 122, Downloads (12 Months): 1277, Downloads (Overall): 7551, Citation Count: 2

This updated course on simulating natural phenomena will cover the latest research and production techniques for simulating most of the elements of nature. The presenters will provide movie production, interactive simulation, and research perspectives ...

15 Seeing, hearing, and touching: putting it all together

Brian Fisher, Sidney Fels, Karon MacLean, Tamara Munzner, Ronald Rensink

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (20.64 MB) Additional Information: full citation, cited by

Bibliometrics: Downloads (6 Weeks): 94, Downloads (12 Months): 1490, Downloads (Overall): 8872, Citation Count: 4

16 Level set and PDE methods for computer graphics

David Breen, Ron Fedkiw, Ken Museth, Stanley Osher, Guillermo Sapiro, Ross Whitaker

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (17.07 MB) Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 67, Downloads (12 Months): 748, Downloads (Overall): 5821, Citation Count: 3

Level set methods, an important class of partial differential equation (PDE) methods, define dynamic surfaces implicitly as the level set (iso-surface) of a sampled, evolving nD function. The course begins with preparatory material that introduces the ...

17 Real-time shading

Marc Olano, Kurt Akeley, John C. Hart, Wolfgang Heidrich, Michael McCool, Jason L. Mitchell, Randi Rost

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (7.39 MB) Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 30, Downloads (12 Months): 440, Downloads (Overall): 3762, Citation Count: 3

Real-time procedural shading was once seen as a distant dream. When the first version of this course was offered four years ago, real-time shading was possible, but only with one-of-a-kind hardware or by combining the effects of tens to hundreds of rendering ...

18 TIMBER: A native XML database

H. V. Jagadish, S. Al-Khalifa, A. Chapman, L. V. S. Lakshmanan, A. Nierman, S. Paparizos, J. M. Patel, D. Srivastava, N. Wiwatwattana, Y. Wu, C. Yu

December 2002 **The VLDB Journal — The International Journal on Very Large Data Bases** , Volume 11 Issue 4

Publisher: Springer-Verlag New York, Inc.

Full text available: Pdf (268.39 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 186, Downloads (Overall): 1859, Citation Count: 101

This paper describes the overall design and architecture of the Timber XML database system currently being implemented at the University of Michigan. The system is based upon a bulk algebra for manipulating trees, and natively stores XML. New access ...

Keywords: Algebra, Document management, Hierarchical, Query processing, Semi-structured

19 External memory algorithms and data structures: dealing with massive data

Jeffrey Scott Vitter

June 2001 **Computing Surveys (CSUR)** , Volume 33 Issue 2
Publisher: ACM Request Permissions
Full text available: Pdf (828.46 KB) Additional Information: full citation, abstract, references, cited by, index terms
Bibliometrics: Downloads (6 Weeks): 80, Downloads (12 Months): 731, Downloads (Overall): 7083, Citation Count: 119

Data sets in large applications are often too massive to fit completely inside the computers internal memory. The resulting input/output communication (or I/O) between fast internal memory and slower external memory (such as disks) can be a major performance ...

Keywords: B-tree, I/O, batched, block, disk, dynamic, extendible hashing, external memory, hierarchical memory, multidimensional access methods, multilevel memory, online, out-of-core, secondary storage, sorting

20 An interactive introduction to OpenGL programming

Dave Shreiner, Ed Angel, Vicki Shreiner

August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes
Publisher: ACM Request Permissions
Full text available: Pdf (3.35 MB) Additional Information: full citation, abstract
Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 97, Downloads (Overall): 1114, Citation Count: 0

"An Interactive Introduction to OpenGL Programming" provides an overview of the OpenGL Application Programming Interface (API), a library of subroutines for drawing three-dimensional objects and images on a computer. After the completion of the course, ...